

# Creating consumer durable retailer customer loyalty through order fulfillment service operations

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## Abstract

Manufacturers now find themselves in the position of finding new ways to remain competitive in the era of retail power. The onus rests on the manufacturer's ability to implement operational strategies that help the retailer achieve its objectives. Specifically, manufacturers that establish successful order fulfillment service can affect retailer loyalty. The overarching goal of this research, therefore, is to examine the importance to operations managers of understanding the order fulfillment needs and expectations of their retail customers and to establish the value-added role that operations management plays in developing retailer loyalty. Empirical evidence is provided on the relationships between relational order fulfillment service, operational order fulfillment service, satisfaction, affective commitment, purchase behavior, and loyalty. Such evidence not only focuses on the strategic importance of the OM discipline in manufacturer–retailer relationships, but also extends previous OM theory by taking a more complex view of the loyalty phenomenon.

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## 1. Introduction

“Whoever owns the shelf, owns the shopper” (Thomason et al., 2006) is an accurate statement that reflects the new reality facing consumer goods manufacturers. This reality defines the shift over the past few decades from a focus on the economic priorities of the manufacturer to those of the retailer. For much of the 20th century retailers were a distribution channel for manufacturers, and brand image and product features largely governed purchases (Sharman, 1984). However, increasing competition and product homogeneity in

many consumer categories have enabled retailers to switch from one manufacturer to another, forcing many manufacturers to compete for retail business as virtually faceless “vendors” (Mitchell, 2004).

Significant levels of competition among consumer products have dramatically increased consumer choices and compressed the importance of once powerful brands to a point where many have lost their form and identity (Lincoln, 2006). As a result, retailers have become the dominant influence on the consumer's buying decisions (Sharman, 1984). With little product differentiation and weakening brand images, research has indicated that the majority of consumers would not change stores or go the extra mile to get their favorite brand (Thomason et al., 2006). Research also has found that “polygamous” loyalty, or the tendency for consumers to divide their loyalty among a number of

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brands, more accurately describes consumer behavior (Dowling and Uncles, 1997).

Manufacturers now find themselves in the position of finding new ways to remain competitive in the era of retail power. For many, this means a change in mentality from creating consumer loyalty to “branding *from* the shelf” (Lincoln, 2006), or building strong relationships to establish *retailer* loyalty. The question remains, however, of how best to build strong relationships with retailers to ensure appropriate shelf space for products when waning consumer loyalty to individual brands puts relationship control in the hands of retailers. The emerging answer suggests that the onus rests on the manufacturing firm’s ability to implement operational strategies that help the retailer achieve its objectives. Specifically, manufacturers that establish successful order fulfillment service – the activities involved in the successful delivery of products to meet retail customer requirements – can ultimately determine if, when, and how much the retailer will order in the future (Newton, 2001). The overarching goal of this research, therefore, is to demonstrate the importance to operations managers of understanding the order fulfillment needs and expectations of their retail customers and to establish the value-added role that operations management plays in developing retailer loyalty.

The current research is set in the context of the consumer durables industry, which features considerable interaction between retail salespeople and consumers during in the buying process (Hawes and Rao, 1993). The intensity of competition in this industry makes it an appropriate setting. The “big four” manufacturer brands (Whirlpool, Maytag, GE and Frigidaire) now face several new players in the market, including LG, Samsung, Haier, and Bosch (Heller, 2006), enabling retailers to fill their stores with more brands and “persuade” customers to buy from their manufacturer of choice. In this industry, as in most consumer goods industries, poor order fulfillment service can have deleterious effects on relationships with retailers. It behoves the manufacturer to be the “chosen one,” and mastery of order fulfillment operations is an essential ingredient of competitive success (Sharman, 1984).

Consistent with previous research, we consider order fulfillment service *as perceived by the retailer* to be a critical element driving retailer customer satisfaction (Lee and Billington, 1992; Stewart, 1995). One objective of this research, therefore, is to investigate the relationship between the retailer’s perceptions of order fulfillment service by a consumer durables manufacturer and the retailer’s perceptions of satisfac-

tion. Since the establishment of loyal relationships is one of “a company’s most important assets” (Ford et al., 2003, p. 49), another objective of the research is to examine the impact of order fulfillment operations on retailer loyalty. It is important to establish empirical evidence of operations management impact on retailer relationships (Staughton and Johnston, 2005) to improve operations managers’ understanding of the relationships among operational strategies and processes, retailer satisfaction, and loyalty. Such evidence not only focuses on the strategic importance of the OM discipline in manufacturer–retailer relationships, but also extends previous OM theory by taking a more complex view of the loyalty phenomenon. This research proposes that loyalty is created by the manufacturer’s ability to connect emotionally and forge long-term bonds with retailers, which *then* influences future behavior or intentions (Kandampully, 1998).

## 2. Conceptual development

As markets become more dynamic, manufacturers have moved from strategies defined by products and markets to those that emphasize the ability to move in and out of products, markets, and businesses quickly in response to changing customer needs and requirements (Stalk et al., 1992). The ability to provide customer value requires a shift in focus to understand the internal processes that enable an organization to capitalize on external changes (Vorhies et al., 1999). Quality, price, robust designs, and conformance to customer specifications are “just the price of admission” (Fuller et al., 1993, p. 88). Often, differentiation stems from an emphasis on order fulfillment characteristics such as ease of doing business, delivery dependability, and responsiveness to a product delivery request. In the retail sector, order fulfillment services put an envelope around the product, and successful manufacturers “push the envelope” (Fuller et al., 1993, p. 88). Day (1994) notes that while order fulfillment activities are often obscured from top management view because they routinely take place inside operational processes within the firm, order fulfillment actually serves as a spanning capability that, when utilized in a strategic manner, creates significant potential for creating competitive advantage.

### 2.1. Order fulfillment

Traditional order fulfillment service research has focused on “hard” internal measures to assess customer requirements, which fall into two general categories: inventory capability (completeness and fill rate), and

order cycle time (length and reliability of the order cycle) (La Londe and Zinzer, 1976). These quantitative measures, however, do not completely explain customer ratings of supplier service levels, and increasingly, suppliers are trying to understand what their customers want besides availability, timeliness, and reliability (Maltz and Maltz, 1998). A critical element that distinguishes the most successful service firms is finding out which parameters of service performance count most heavily with their customers (Jones and Sasser, 1995; Reichheld, 1996; Sharman, 1984). This is important because, as previous research has established, firms can be inefficient by offering very good service on elements of order fulfillment that customers do not value (Stank et al., 2003).

Much of the research about order fulfillment service has drawn upon the service quality research and SERVQUAL survey instrument in marketing (Parasuraman et al., 1985, 1988). While the SERVQUAL scale was applied to several different industry contexts, there was eventually a move to using alternate dimensions when measuring order fulfillment service. Bienstock et al. (1997) developed a scale that measured perceptions of physical distribution service quality (PDSQ) based on an earlier conceptual model that included timeliness, availability and condition (Mentzer et al., 1989). More recently, Mentzer et al. (2001) developed a logistics service quality (LSQ) scale with specific logistics service operations dimensions. They conceptualized that order fulfillment is a process that has different effects on a firm's customer segments. In the logistics discipline, several studies have also applied marketing tools to evaluate logistics service using customer perceptions rather than relying on providers' self-reported performance indicators (Stank et al., 2003; Stank et al., 1999; Daugherty et al., 1998).

Recently, the operations management literature has explored order fulfillment in an e-commerce context. Rabinovich and Bailey (2004) extended the research on physical distribution service by assessing the impact of pricing, transaction attributes, and firm attributes on physical distribution service quality. Another study posited that customer satisfaction with order fulfillment will decrease moving along a continuum of product types, from convenience goods to specialty goods, and the results indicated that customers tend to have higher satisfaction levels with the order fulfillment process of convenience and shopping goods than with specialty goods (Thirumalai and Sinha, 2005).

A complementary stream of operations management e-commerce research focused on the impact of perceptions of order fulfillment service on repurchase

intentions. Heim and Sinha (2001) found ease of return, product availability and timeliness of delivery significantly impact customers' future buying behavior. Perceptions of e-business quality, product quality and service quality were also found to affect customers' behavioral intentions (Boyer and Hult, 2005). In a similar study, Boyer and Hult (2006) found that product and service quality, product freshness, and substantial time-savings were all significantly associated with behavioral intentions.

Order fulfillment service aligns a firm's ability to sense external changes in the market and customer requirements with the internal operational processes and activities that need to be implemented to ensure superior customer value (Day, 1994). Therefore, order fulfillment has two dimensions (Maltz and Maltz, 1998) that together can create a strong incentive for manufacturers to gain retailer loyalty. The first is an internal or operations-oriented dimension (Collier, 1991), involving cycle time, on-time delivery, and inventory availability. Based on a conceptualization from previous operations management research (Stank et al., 2003; Stank et al., 1999), the current research defines *operational order fulfillment* as a manufacturer's operational delivery activities including physical features of the service and perceptions of reliability, i.e., the ability to perform the promised service dependably and accurately (Stank et al., 2003; Stank et al., 1999).

The second dimension of order fulfillment service reflects an external or market-oriented dimension, which involves the firm's ability to sense and understand customer needs through relationships created by customer service personnel (Collier, 1991). In this research, the construct of *relational order fulfillment* captures this external dimension of order fulfillment. Relational order fulfillment is defined as the manufacturer's ability to understand customer needs and expectations. Harvey (1998) notes that contact personnel are critical to the creation of quality, and customers make up their mind during these "moments of truth" that take place during service encounters. At that time, contact personnel are both marketing and operations, and in the eyes of the customer, they *are* the service company (Harvey, 1998). Importantly, both aspects of order fulfillment service are measured as retail customers' perceptions of the level of service provided by manufacturers.

Fig. 1 provides an overview of the conceptual model, portraying relational order fulfillment service as an antecedent to operational order fulfillment service. In Mentzer et al. (2001), the relational component of order fulfillment was conceptualized as personnel contact

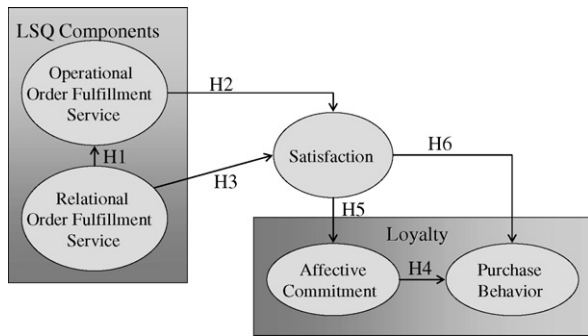


Fig. 1. Conceptual model and hypotheses.

quality, which referred to the customer orientation of the supplier's customer service contact people. These authors found evidence that personnel contact quality positively affected several of the operational order fulfillment elements (e.g., timeliness, order accuracy, order condition) because customer relationships allow the supplier to gain insight about what the customer needs and wants. Stank et al. (1999) and Stank et al. (2003) confirmed these relationships in the operations management literature, finding that once a supplier learns about customer needs and wants it can better focus on the operational means of meeting them. Therefore, we present the following hypothesis:

**Hypothesis 1.** In manufacturer–retailer relationships, relational order fulfillment service has a positive effect on operational order fulfillment service.

## 2.2. Satisfaction

Satisfaction has been conceptualized, measured, and tested for over twenty years in marketing research. More recently, satisfaction has been connected to order fulfillment operations, therefore placing its relevance in the operations management domain. Previous research has found evidence that operational and relational perceptions relative to order fulfillment service have significant positive links to customer satisfaction (Daugherty et al., 1998). Stank et al. (1999) found that the relationship between operational performance and customer satisfaction was significant, and Stank et al. (2003) found that relational performance demonstrates a positive relationship with satisfaction. Viewing order fulfillment from a process perspective, Mentzer et al. (2001) also found that for different customer segments, satisfaction was positively affected by different order fulfillment dimensions.

Although satisfaction has been described by some as transactional in nature (Oliver, 1993), a more dominant

view sees satisfaction as a judgment based on the cumulative experience made with a certain product or service rather than a transaction-specific phenomenon (Anderson et al., 1994). Consistent with the attitudinal perspective, cumulative satisfaction is the more economic, psychology-based general perception of the company's overall performance (Rust et al., 1995). Thaibaut and Kelly (1959) suggest that satisfaction judgments are merely the accumulated prior experiences in the relationship—a proposition that is consistent with the cumulative rather than transactional view of customer satisfaction (Wangenheim, 2003). “Cumulative” satisfaction has been used interchangeably with “overall” satisfaction. Fornell (1992) suggests that the majority of the satisfaction literature advocates that satisfaction is an overall post-purchase evaluation. Anderson and Sullivan (1993) agree that satisfaction is a customer's overall or global judgment regarding the extent to which product or service performance matches expectations.

Although it has been measured in numerous ways, the previous discussion highlights that satisfaction is the result of a cognitive evaluation based on total purchase experience over time, based on (1) general satisfaction, (2) confirmation of expectations, and (3) the distance from the customer's hypothetical ideal product. The logistics field describes how order fulfillment creates customer satisfaction through the “seven R's”—a firm's ability to deliver the *right* amount of the *right* product at the *right* place at the *right* time in the *right* condition at the *right* price with the *right* information (Coyle et al., 1992; Stock and Lambert, 2001). This conceptualization implies that part of the value of a product is created by a firm's order fulfillment service, and having all these “rights” in place should influence the retailer's overall global judgment of the manufacturer (Mentzer et al., 2001). Thus, Fig. 1 depicts the following hypothesized relationships between operational and relational order fulfillment service positively and satisfaction.

**Hypothesis 2.** In manufacturer–retailer relationships, operational order fulfillment service has a positive effect on satisfaction.

**Hypothesis 3.** In manufacturer–retailer relationships, relational order fulfillment service has a positive effect on satisfaction.

## 2.3. Customer loyalty

Because of the growing intensity of competition, corporate strategies in established industries have

shifted from a predominant focus on attracting new customers to focusing on securing and improving customer loyalty (Bruhn and Grund, 2000). Although there is much research on customer loyalty, it is difficult for companies to implement because much of

it is ambiguous and contradictory. Table 1 shows 24 different definitions found in studies exploring loyalty. As the table suggests, loyalty has been defined in terms of repeat purchasing, a positive attitude, long-term commitment, intention to continue

Table 1  
Definitions of loyalty

Author	Definition
Biong (1993)	<i>Loyalty</i> expresses the degree to which the retailers want the company as a supplier in the future. It parallels to the continuity measure and could comprise both the favorable attitude and perceived or real lack of alternatives
Bloemer and Kasper (1995)	<i>Loyalty is</i> (1) the biased (i.e., non-random), (2) behavioral response (i.e., purchase), (3) expressed over time, (4) by some decision-making unit, (5) with respect to one or more alternative brands out of a set of such brands, which (6) is a function of psychological (decision making, evaluative) processes resulting in brand commitment
Caruana (2002)	<i>Service loyalty</i> is the degree to which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers only using this provider when a need for this service exists
Dick and Basu (1994)	<i>Loyalty</i> is the strength of the relationship between a customer's relative attitude and repeat patronage
Ellinger et al. (1999) and Daugherty et al. (1998)	<i>Loyalty</i> is a long-term commitment to repurchase involving both repeated patronage (repurchase intentions) and a favorable attitude (commitment to the relationship)
Estalemi (2000) and Bubb and Van Rest (1973)	<i>Loyalty</i> is the behavioral tendency of the consumer to repurchase from the firm
Ganesh et al. (2000)	<i>Loyalty</i> is a combination of both commitment to the relationship and other overt loyalty behaviors.
Hennig-Thurau et al. (2002)	<i>Loyalty</i> focuses on a customer's repeat purchase behavior that is triggered by a marketer's activities
Kandampully and Suhartanto (2003)	A <i>loyal customer</i> is one who repurchases from the same service provider whenever possible, and who continues to recommend or maintains a positive attitude towards the service provider.
Khatibi et al. (2002)	<i>Loyalty</i> refers to the strength of a customer's intent to purchase again goods or services from a supplier with whom they are satisfied
Jacoby and Kyner (1973) and Maignan et al. (1999)	<i>Loyalty</i> is the nonrandom tendency displayed by a large number of customers to keep buying products from the same firm over time and to associate positive images with the firm's products
Mittal and Lassar (1998)	<i>Loyalty</i> is defined as the inclination not to switch
Neal (1999)	<i>Loyalty</i> is the proportion of times a purchaser chooses the same product or service in a specific category compared to the total number of purchases made by the purchaser in that category, under the condition that other acceptable products or services are conveniently available in that category
Oliver (1999) and McMullan and Gilmore (2003)	<i>Loyalty</i> is a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, <i>despite</i> situational influences and marketing efforts having the potential to cause switching behavior
Olsen (2002)	<i>Loyalty</i> is a behavioral response expressed over time
Pritchard et al. (1999)	<i>Loyalty (L)</i> is a composite blend of brand attitude ( <i>A</i> ) and behavior ( $P[B]$ ), with indexes that measure the degree to which one favors and buys a brand repeatedly, where $L = P[B]/A$
Proto and Supino (1999)	<i>Loyalty</i> is the feeling of attachment to or affection for a company's people, products, or services
Reynolds and Arnold (2000)	<i>Salesperson loyalty</i> is a commitment and intention to continue dealing with the particular sales associate. <i>Store loyalty</i> is commitment and intention to continue dealing with the particular store
Ruyter et al. (2001)	<i>Loyalty intention</i> reflects customers' motivation to continue the relationship
Selnes and Hansen (2001)	<i>Loyalty</i> is an assessment of expected future customer behavior. It is the motivation to continue the relationship, to talk favorably about the supplier, and to expand the relationship
Selnes (1993)	<i>Loyalty</i> expresses an intended behavior related to product of service, including the likelihood of future purchases or renewal of service contracts, or conversely, how likely it is that the customer will switch to another brand or service provider
Sirdeshmukh et al. (2002)	<i>Consumer loyalty</i> is indicated by an intention to perform a diverse set of behaviors that signal a motivation to maintain a relationship with a focal firm, including allocating a higher share of the category wallet to the specific service provider, engaging in positive word-of-mouth and repeat purchasing
Stank et al. (2003)	<i>Loyalty</i> is a long-term commitment to repurchase involving both a cognitive attitude toward the selling firm and repeated patronage
Wind (1970)	<i>Source loyalty</i> stems from the offerings (quality, quantity, delivery, price, service), buyer's past experience with suppliers, work simplification rules, and organizational variables—pressure for cost savings, dollar value of order, number of complaints

the relationship, expressing positive word-of-mouth, likelihood of not switching, or any combination of these.

In the operations management literature, loyalty can be found in diverse research streams. For instance, Archer and Wesolowsky (1996) explored the combined effects of “critical incidents” involving product and service quality on vehicle owner intentions to repurchase. In a similar stream of research about service recoveries, Craighead et al. (2004) found that loyal customers are most likely to suffer a decline in loyalty when problems are not resolved but are most likely to increase or maintain loyalty whenever the problem is deemed to have been resolved successfully. Using the service-profit chain concept from the European hospitality industry, Kassinis and Soteriou (2003) found a positive relationship between environmental practices and customer satisfaction, between customer satisfaction and loyalty, and between loyalty and performance. In that same vein, Wisner et al. (2005) explored the elements of service delivery that impact volunteer satisfaction, and tested the relationship between volunteer satisfaction and loyalty to the not-for-profit organization. In the recent stream of e-commerce research, the relationships between perceptions of order fulfillment processes by electronic retailers and customer loyalty have been examined (Boyer and Hult, 2005, 2006; Heim and Sinha, 2001). In all of these studies, loyalty was measured from a behavioral perspective, where loyalty was conceptualized as the propensity to repurchase. One study in the OM literature depicted loyalty as a multi-dimensional construct involving both long-term commitment to repurchase involving both a favorable cognitive attitude toward the selling firm and repeat purchasing behavior (Stank et al., 1999).

While definitions and measurement scales abound in explaining loyalty, the phenomenon seems to manifest itself in two distinct ways: behavior and emotion (Reynolds and Arnold, 2000). Currently, most research measures loyalty as behavioral intentions alone, as a global construct that has both emotional and repeat purchase measurement items, or in limited instances, as a second order construct. This research contends that behavior alone does not necessarily indicate loyalty (Baloglu, 2002; Chandhuri and Holbrook, 2001; Chiou and Dröge, 2006; Dick and Basu, 1994; Jacoby and Kyner, 1973) as in many instances customers may be forced to buy due to lack of choice, and will switch anytime if the situation becomes favorable to do so (Kumar et al., 2003). For this reason, true loyalty must be determined not only by behavior, but by the feelings

of affect elicited from the relationship (Chandhuri and Holbrook, 2001). Examining loyalty as a single construct, even by including both behavioral and emotional measurement items, however, does not fully capture loyalty in most supplier–customer relationships. A first-order scale likely does not capture the significance of either component individually, and there is also risk of capturing variance from other situational factors. As a second-order construct, all dimensions are given equal weight and treated as if they occur simultaneously. These operationalizations ignore any temporal ordering of the dimensions being tested. Some components are not just correlated with, but dependent upon, other components (Mentzer et al., 2001).

We extend previous research by contending that *loyalty* is the strength of the relationship between the retailer’s affective commitment toward the manufacturer and the retailer’s repeat purchase behavior (Dick and Basu, 1994). Viewing loyalty as an emotion–behavior relationship allows investigation of the phenomenon from a causal perspective, which leads to greater understanding of the antecedents and consequences of the manufacturer–retailer relationship. This causal relationship allows exploration of *when* contingent factors enhance/decrease loyalty, *how* other underlying processes influence loyalty, and “*so what*” issues addressing the consequences of loyalty (Dick and Basu, 1994). Thus, other previously measured dimensions of loyalty such as word-of-mouth and price sensitivity are viewed as outcomes of the loyalty relationship. A better understanding of the nature of these relationships is critical for operations managers in the emerging environment of service-oriented competition.

As Fig. 1 demonstrates, loyalty is conceptualized as the causal relationship between affective commitment and purchase behavior. A number of researchers have argued that affective commitment best describes the emotional component of loyalty (Mahoney et al., 2000). In the marketing channels literature, affective commitment expresses the extent to which channel members *like* to maintain their relationship with specific partners (Geyskens et al., 1996; Mattila, 2004). It represents an attitudinal affective orientation and a general positive feeling toward an exchange partner that is apart from its purely instrumental worth (Ruyter and Wetzels, 1999). Research suggests affective commitment is effective for developing and maintaining mutually beneficial relationships between partners (Kumar et al., 1994). For this research, *affective commitment* is defined as the strength of emotional attachment and positive feelings that the retailer has for the manufacturer. As our conceptualiza-

tion posits, loyalty is also demonstrated by the purchasing pattern over time (Dick and Basu, 1994). Therefore, *purchase behavior* is defined as the likelihood of buying a manufacturer's products or services again in the future.

Hansen and Hetn (2004) summarize loyalty by explaining that if a customer's affective commitment is high, it should bring about a wish and motivation to continue the relationship. In the context of the current research, the retailers' sales people exert considerable influence on the consumer decision and consumers usually have an "evoked set" of brands in mind, so allegiance to a particular manufacturer is not necessary. Since this type of commitment does not include instrumental cost-benefit evaluations, purchase behavior is more likely to be derived from the emotional pleasure associated with the relationship, and the feelings of fondness developed within the relationship.

**Hypothesis 4.** In manufacturer–retailer relationships, affective commitment has a positive effect on purchasing behavior.

#### 2.4. The satisfaction–loyalty relationship

Wetzels et al. (1998) found a significant positive relationship between satisfaction and affective commitment. Johnson et al. (2001) concur, noting that satisfaction affects repurchase intentions largely through the ability to build strong relationships between suppliers and customers. Bloemer and Kasper (1995) also found a positive relationship and suggest that affective commitment differentiates between true loyalty and spurious loyalty. The most important difference between the two concepts is that true loyalty is based on affective commitment and spurious loyalty is not based on any commitment at all, but rather purchase behavior based upon a lack of alternatives.

**Hypothesis 5.** In manufacturer–retailer relationships, satisfaction has a positive effect on affective commitment.

The literature pertaining to the relationship between customer satisfaction and the behavioral element of loyalty can be organized in three categories (Homburg and Giering, 2001). The first category involves a linear relationship, which is how the relationship is most commonly portrayed in research. The second examines effects of moderator variables on the relationship between the two constructs (Homburg and Giering, 2001), such as customer characteristics (Homburg and Giering, 2001), perceived product importance, purchase uncertainty, switching costs, relationship

duration (Wangenheim, 2003), mood, and value attainment (Ruyter and Bloemer, 1999). Other studies found that satisfaction is also related to purchase behavior depending on transaction costs (Oliva et al., 1992) and switching barriers (Fornell, 1992). The final category is found in research that supports more complex (i.e., nonlinear) structures (Homburg and Giering, 2001). As Boyer and Hult (2006) point out, a repeat customer is not necessarily completely satisfied; rather, there are degrees of customer loyalty and the relationship is not necessarily linear. Fornell (1992) found an asymmetric relationship and contends that the satisfaction–purchase behavior link is nonlinear because the impact of satisfaction on repurchase intentions is greater at the extremes. Coyne (1989) proposed the relationship between satisfaction and behavior is nonlinear, involving two critical thresholds. As Fig. 2 demonstrates, when satisfaction rises above a certain threshold, or the trust zone, purchase behavior climbs rapidly. When satisfaction falls below the lower threshold, or the defection zone, purchase behavior declines rapidly. Between thresholds, or the consideration zone, purchase behavior is flat. This implies that satisfaction has to be high enough to encourage behavioral loyalty, or low enough to diminish it, and failing to account for asymmetric and non-linear relationships may lead to inconclusive and contradictory empirical findings (Anderson and Mittal, 2000).

**Hypothesis 6.** The relationship between satisfaction and purchasing behavior is diatonic, where:

- A. there is a strong positive effect in the trust zone and the defection zone, and
- B. there is a neutral or weak positive effect in the consideration zone.

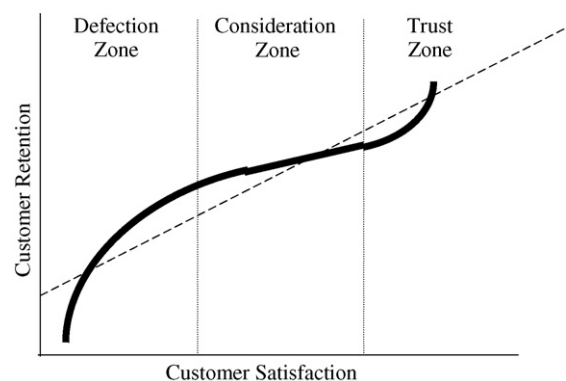


Fig. 2. Satisfaction–purchase behavior relationship. Adopted from Anderson and Mittal (2000).

### 3. Research method

The research was conducted in a manufacturer–retailer context in the consumer durables industry, and the dataset was developed using a segment of the manufacturer’s customer base. In this research, the manufacturer’s products carry significant brand equity, so a finding that order fulfillment service is a significant factor in creating loyalty would make an important statement about the relevance of providing superior service.

#### 3.1. Scale development

Development of the measurement scales for each construct in the model proceeded through a series of steps. A review of the relevant literature was first conducted to identify available measures. Since the sampling frame came from a consumer durable manufacturer’s retail customer segment, we adapted existing measures based on interviews with the manufacturer’s managers in sales, marketing, and supply chain groups. Measures for operational and relational order fulfillment service were constructed first in accordance with the existing scales from Stank et al. (2003), Stank et al. (1999), and Mentzer et al. (2001). According to Dick and Basu (1994), it is important to create measures that gauge perceptions “relative” to other firms. Because perceptions are generally anchored to some kind of “standard,” this gives the respondents a common point of reference. Therefore, the items were adapted to reflect a comparison to other manufacturers in the consumer durables industry.

Loyalty was conceptualized as the relationship between affective commitment and purchase behavior. Affective commitment has several measurement scales in the literature, and items were adapted from Caruana (2002), Kim and Frazier (1997), Kumar et al. (1994), and Stank et al. (2003). These items consisted of both Likert and semantic differential scales, and were also adapted to comparison statements. Purchase behavior was also adapted to have comparative items, with the measures adapted from Caruana (2002), Matilla (2001) and Too et al. (2001).

Satisfaction was the only construct that did not have comparative measures to other manufacturers. The construct was considered an overall and cumulative measurement of the customers’ perceptions of service. As the definition suggests, the comparison standard for this construct was how well the manufacturer performed relative to expectations. The items for this scale were adapted from Selnes

and Gonhaug (2000) and Garbarino and Johnson (1999).

After adapting the measures, a survey instrument was created and subjected to a pre-test. A random sample of 450 customers from the list supplied by the manufacturer was initially contacted by e-mail to complete the survey. Analysis of the pre-test resulted in some minor revisions to a few of the items to enhance readability. We also found that some customers were exclusive dealers for this manufacturer, so those customers were removed from the sampling frame in order to diminish any bias in the results.

Before hypothesis testing, we also engaged in scale purification. Following basic descriptive analyses, including examination for coding errors, normality, skewness, kurtosis, means, and standard deviations, we subjected the purification data set to confirmatory factor analyses (CFA) by means of AMOS 6.0. In these analyses, items were grouped into *a priori* conceptualized scales. Modification indices, standardized residuals, and fit statistics were used to flag potentially problematic items (Anderson and Gerbing, 1988; MacCullum, 1986). These items were examined within the theoretical context of each scale and were deleted on substantive and statistical grounds, if appropriate (Anderson and Gerbing, 1988; MacCullum, 1986) (described in more detail for the sample included in the “Measurement Analysis” section). Eliminating items from the initial pool resulted in 25 items for the five construct scales. The scales are provided in Appendix A.

#### 3.2. Sample design

To examine the model, we collected data from the independent retail segment within the consumer durable manufacturer’s customer base. Independent retailers are segmented by this manufacturer as having sales with this manufacturer of under 5 million dollars annually. These customers represent close to 20% of the firm’s annual revenues. This segment of the customer base was chosen because it was important that someone in the store have authority over the purchase decisions. Many of the “big-box” and larger national retailers have centralized purchasing, so managers at the store level receive allocation of products, but have no direct authority in the purchasing decisions from the manufacturer.

The participating manufacturer provided a customer list, most of which had corresponding e-mail addresses. For that reason, we chose to develop a web-based survey instead of a mail survey. Customers without e-mail



addresses were contacted via phone and were asked to participate in the survey. The phone calls resulted in 250 retailers agreeing to participate, and of those, we received 160 completed surveys. After undeliverable e-mails were returned, we successfully sent 1168 e-mails to the remaining retailers on the customer list, and 465 completed surveys were returned. Of the total 625 completed surveys (i.e., 160 from the phone call list, 465 from the e-mail list), 229 exclusive dealers were removed from the study, so the final sample consisted of 396 responses, with an overall response rate of 32.5% when exclusive dealers and undeliverable surveys were removed from the total sample contacted. We assessed nonresponse bias by contacting a random sample of 30 nonrespondents from the sample by telephone and asking them to answer five non-demographic questions (Mentzer and Flint, 1997). The *t*-tests of group means revealed no significant differences between respondents and nonrespondents on any of the questions. Thus, nonresponse bias was not considered a problem.

The target respondent in each retail store was the individual that made the purchases from the manufacturer for the store, and who dealt with the manufacturer's contact personnel directly. The e-mail addresses provided by the manufacturer gave us that information. For those customers that were contacted by phone, we asked to speak to the person who dealt directly with the manufacturer. As demonstrated in Appendix B, the data were segmented by the duration of the relationship, the customers' annual revenues, the percentage of the business that went to this manufacturer, and the respondent contact method.

### 3.3. Measurement analysis

To confirm construct unidimensionality, reliability, and validity, we evaluated the psychometric properties of the five constructs using CFA by means of AMOS. Within this analysis, we incorporated both theoretical and statistical consideration in developing the scales (Anderson and Gerbing, 1988). We evaluated the model using the DELTA2 index, RMSEA, and the CFI. These have been shown to be the most stable fit indices by Gerbing and Anderson (1992). The  $\chi^2$  statistics with corresponding degrees of freedom are included for comparison purposes (Jöreskog and Sörbom, 1996). Using these criteria, the analysis resulted in acceptable fit of the data (Table 2).

Next, we assessed the reliability of the measures. Within CFA, construct reliability is calculated using the procedures outlined by Anderson and Gerbing (1988),

Table 2  
Fit statistics

	Measurement model	Structural model
CFI	.952	.948
DELTA2	.953	.948
RMSEA	.066	.069
$\chi^2$	727.3	772.092
d.f.	265	269

using the formula,  $(\sum\lambda)^2/[(\sum\lambda)^2 + \sum(1 - \lambda_j^2)]$ . This estimate is very close to coefficient alpha, and acceptable reliability is .70 or greater. A complementary measure of construct reliability is the average variance extracted measure, where  $\sum\lambda^2/[\sum\lambda^2 + \sum(1 - \lambda_j^2)]$ . This measures the total amount of variance in the indicators accounted for by the latent variable. An acceptable reliability value for variance extraction is .50 or greater (Garver and Mentzer, 1999). As shown in Table 3, the five constructs demonstrate sound internal consistency.

Table 3  
Results of the measurement model analyses

Construct	Item Loading	Construct Reliability	Variance Extracted
Operational LSQ		.895683735	.599028167
OP1	.810		
OP2	.751		
OP3	.877		
OP4	.899		
OP5	.785		
OP6	.435		
Relational LSQ		.921919049	.7057356
RL1	.905		
RL2	.927		
RL3	.893		
RL4	.814		
RL5	.633		
Satisfaction		.91774726	.6942564
SAT1	.898		
SAT2	.875		
SAT3	.524		
SAT4	.887		
SAT5	.867		
Affective commitment		.930502748	.7290462
AC1	.893		
AC2	.937		
AC3	.843		
AC4	.826		
AC5	.763		
Purchase behavior		.968298447	.88434725
PB1	.919		
PB2	.976		
PB3	.970		
PB4	.886		

Table 4  
Discriminant validity analyses

	Operational LSQ	Relational LSQ	Satisfaction	Affective commitment	Purchase behavior
Operational LSQ	<b>0.5990</b>				
Relational LSQ	0.25	<b>0.7057</b>			
Satisfaction	0.5329	0.5776	<b>0.6943</b>		
Affective commitment	0.2601	0.4761	0.5929	<b>0.7290</b>	
Purchase behavior	0.1444	0.1024	0.2401	0.4761	<b>0.8843</b>

To assess convergent validity, the overall fit of the measurement model and the magnitude, direction, and statistical significance of the estimated parameters between latent variables and their indicators were assessed (Anderson and Gerbing, 1988). We assessed the factor loadings (lambdas) to make sure the items loaded significantly on their designated latent variables (Anderson, 1987). The standardized lambda estimates in Table 3 present ample evidence for this component of construct validity. The lowest, although significant, value among the items is .435 (item OP6). However, this item was kept in the analysis for reasons of nomological and face validity.

Finally, we estimated discriminant validity in order to verify that items from one scale did not load or converge too closely with items from a different scale (Dabholkar et al., 1996). Fornell and Larcker (1981) suggest that a stringent test for discriminant validity is to examine whether the average variance extracted for each construct is greater than the square of the correlation between the constructs. Table 4 displays these results and provides evidence of discriminant validity between the constructs. As an additional test to ensure the items did discriminate, we used the nested model approach, where comparisons are made between the original measurement model and successive models with correlations (phis) among latent variables fixed to 1. As long as the alternate measurement models fail to demonstrate significantly better fit than the original model, discriminant validity exists (Bagozzi and Youjae, 1998). We evaluated one pair of factors at a time, as suggested by Anderson and Gerbing (1988), and found that each alternate model did not demonstrate better fit. Given the overall sound assessment of the measurement model, attention was then directed to the structural model and the hypothesized relationships.

#### 4. Results and discussion

The six hypotheses illustrated in Fig. 1 were tested simultaneously in a structural equation model using AMOS 6.0. The fit statistics offered in Table 4 are comparable to those of the measurement model, and

demonstrate sound model fit (CFI = .948, DELTA2 = .948 and RMSEA = .069). Examination of the hypotheses can proceed given an overall sound assessment of model fit, and the results of the hypothesis tests are provided in Fig. 3.

The model results indicate a strong confirmation for Hypothesis 1, supporting the contention that as the manufacturer's customer personnel develop working relationships with customers, the manufacturer can learn more about the retailers' operational needs, and therefore align processes to meet those needs. Hypotheses 2 and 3 suggest that both operational and relational order fulfillment service have a positive influence on satisfaction. Two other studies examined this relationship and found conflicting results. Stank et al. (2003) found support for the relational component and no support for the operational component, and Stank et al. (1999) found strong support for the operational component and marginal support for the relational component. This analysis found strong support for the influence of both relational and operational order fulfillment service on satisfaction. We believe the reason for this result is the industry context. In interviews with some of the retailers and the manufacturer's representatives, we found that these small retailers usually only carry floor models, and when a sale is made to consumers, the retailer gives them a delivery date for the appliance they bought. The retailer then relies on consistent and dependable

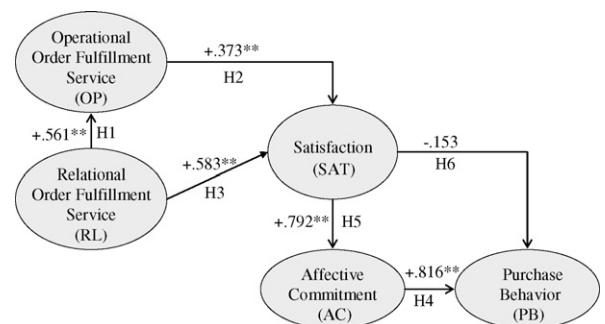


Fig. 3. Hypothesis test results standardized estimates. \*\* Significance at the .001 level.

delivery from the manufacturer in order to keep the final consumer satisfied, making operational order fulfillment crucial, but the manufacturer's customer personnel also play a key role for retailers in terms of receiving orders, communicating delays, and helping with any problems that may arise.

**Hypothesis 4** proposes that affective commitment has a positive influence on purchase behavior, and this constitutes loyalty. There was strong support for this hypothesis, so unlike previous research that takes a simpler view of loyalty, we maintain that loyalty is the causal relationship between affective commitment and purchase behavior. This is a significant finding because this view of loyalty “unbundles” the emotional and behavioral components. Additionally, unlike the few studies that look at loyalty multi-dimensionally, this conceptualization infers causation and temporal ordering. This supports the contention that building emotional connections and trust has a significant effect on the customer's future buying behavior.

The last two hypotheses explored the satisfaction–loyalty relationship. We found support for **Hypothesis 5**, which indicates that satisfaction does have a significant influence on affective commitment. Greater levels of retailer satisfaction engender a stronger emotional attachment to the relationship with the manufacturer. Interestingly, the unstandardized parameter estimate for this relationship is greater than 1 (1.09), which normally indicates a problem. However, in this model, this is an over-inflated estimate because of suppression, which will be explained further with the next hypothesis.

The other satisfaction hypothesis, which predicted a nonlinear relationship between satisfaction and purchase behavior, where the relationship is more positive at the extremes, also gave rise to an interesting result. Applying a polynomial regression formula, where  $CS^* = \beta_1CS + \beta_2CS^2 + \beta_3CS^3 + \beta_0$ , we found no support for H6. As *post hoc* analysis, we then tested for a direct relationship. As many previous studies support, we expected to find a significant relationship. However, as Fig. 3 suggests, the results produced a moderately significant ( $p < .05$ ) *negative* parameter estimate (−.153) in AMOS. This surprising finding indicates suppression in the model in the relationship between satisfaction and purchase behavior. Suppression indicates the relationship between two variables (satisfaction and purchase behavior) is hiding the real relationship with another variable (affective commitment and purchase behavior) (Cohen and Cohen, 1983). Satisfaction and purchase behavior are positively correlated, but there is a negative path weight between the two. This occurs because this path is “suppressing”

another over-inflated path—the “real” relationship is from satisfaction to affective commitment to purchase behavior, which is why the affective commitment–purchase behavior unstandardized path is greater than 1. Therefore, this is a fully mediated model, and the best explanation for the relationship between these three constructs is that satisfaction affects purchase behavior *through* affective commitment. In other words, satisfaction leads to affective commitment, and this emotional attachment is what influences a customer's subsequent purchase behavior.

After a review of the literature, we found evidence of only one similar finding in another context. In a business-to-business context, Wetzels et al. (1998) found that satisfaction did not directly influence the customers' intention to stay, but did so indirectly through affective commitment, indicating that affective commitment is a mediating variable. The significance of this finding again points to the need to “unbundle” the loyalty components in order to better understand a customer's relationship with a supplier.

As a final note, the loyalty literature maintains that customers' purchase behavior can be impacted by perceived product importance or criticality (Bolton and Myers, 2003; Ostrom and Iacobucci, 1995). This is particularly significant in this research, as we contend that retailers are no longer held hostage by consumer loyalty to strong manufacturer brands. Further, price changes may also affect purchase behavior. At the time of this study, the cooperating firm was in negotiations with another organization regarding potential partnerships. As a result, all prices were static and there were no price changes for the durable goods. Additionally, we also controlled for product criticality, and no significant differences were found in the model. Therefore, as we suspected, dependence on the product does not affect purchase behavior.

## 5. Conclusions and implications

The impact of the shift to retailer power in the manufacturer–retailer relationship challenges the mass production mentality (“doing things right”) and challenges manufacturers to focus on developing customer closeness as a way to provide higher levels of service operations effectiveness (the ability to “do the right things”) (Stank et al., 1999). Research focusing on developing a better understanding of the relationship between service operations strategies and relationship success (Staughton and Johnston, 2005) as well as “customer focused” operations capabilities that enable manufacturers to build lasting distinctiveness

with retail customers (Zhao et al., 2001), however, has only limited coverage in the existing literature. This research demonstrates how retail customers' perceptions of order fulfillment operations have the potential to move manufacturers from "faceless vendors" to value-adding partners, which can play a significant role in developing retailer loyalty.

The results of this research lead to important insights for the manufacturer–retailer link in the supply chain. First, the impact of customer perceptions of order fulfillment service on creating competitive advantage through building satisfaction, and ultimately, retailer loyalty provides empirical evidence of the critical role operations management plays in a manufacturer's overall strategy. Second, the research supports the existence of a more complex, mediating relationship between satisfaction, affective commitment, and purchase behavior. Just satisfying customers may not be enough to influence future behavior (Boyer and Hult, 2006); forging emotional bonds and trust in the relationship stems from first satisfying customers and consequently influences purchase behavior.

Finally, the research extends knowledge of how customer loyalty manifests itself in manufacturer–retailer relationships. These results justify the importance of looking at the emotional and behavioral components of loyalty not only as distinctly different constructs, but as a causal relationship between affective commitment and purchase behavior. Understanding the level of commitment, or the emotional connection to the relationship can be significant in understanding and developing long-term relationships between the manufacturer and its retail customers. As long as retailers are in the "power position" in a supply chain, operations managers can play a key role in building retail customer "attachment" by implementing order fulfillment strategies that are tailored to meeting the specific operational needs of key retailers

### 5.1. Future research

While this research extends previous empirical investigations of order fulfillment service's impact on loyalty, several extensions can be made to this stream of research to add further insights. Since the research was done in one industry context with one segment of a manufacturer's retail customer base, it is important to test the generalizability of these findings to other retailer types and across other industries. The retailers in this study were small by comparison to other retail giants, so the dynamics are likely different. It would be interesting to see how the model changes for these more powerful

"big box" retailers. For instance, is the importance of building emotional connections with retailers as important in a setting where the focus shifts to meeting quarterly earning estimates that drive stock price? Because the big retailers have been able to cut their stock levels with impunity, place small orders, and demand speedy delivery at short notice (Sharman, 1984), perhaps satisfaction is derived more from the "hard" side of order fulfillment in this context.

Future research could also investigate other manufacturer–retailer contexts. While the consumer durable goods industry is important because of the magnitude of its dollar volume and the significance of each consumer purchase (Hawes and Rao, 1993), the relationship between order fulfillment operations and loyalty might look different in other industries. For instance, consumer durables still involves a high degree of personal selling, giving retailers more control over consumer purchases. It is important to test the generalizability of these findings to other industries, like consumer package goods that are driven by self-service, or the apparel industry that also involves personal selling.

Improving customer perceptions of order fulfillment service is an important and critical step for ensuring operations management effectiveness (Gunasekaran et al., 2001). Firms must first understand customer needs and expectations in order for operations managers to focus on the operational elements that have the greatest effect on customer satisfaction. Developing order fulfillment processes that create distinct capabilities (Day, 1994), however, requires "hard" and objective internal measures that are critical in assessing whether the firm is reaching its order fulfillment goals, as defined by the customer. While this research is a first step in understanding customer perceptions, future research should be extended to focus on what a firm must actually *do* to create a system for order fulfillment that leads to differentiation in the marketplace.

### 5.2. Managerial implications

This research highlights the managerial significance of using an understanding of specific customer needs to develop order fulfillment service capabilities in order to maintain a loyal customer base. Since physical products are bundled with their accompanying services, firms can differentiate their products by the quality of the operations service processes accompanying those products (Novack et al., 1995). Because of this, every industry is now potentially a "service" industry (Anderson et al., 1994), and customer segments may

be defined based upon differing customer order fulfillment service needs. Operations managers have reported that the biggest gaps between “current” and “required” service do not occur in traditional operations service areas but rather in the “soft” performance elements that contribute to improving relationships (Staughton and Johnston, 2005). Understanding the impact of both the operational elements of order fulfillment, and the need to provide service personnel who are knowledgeable and sensitive to understanding the needs of the customer base can go a long way in differentiating a seemingly similar physical product.

Operations managers must be conscientious, however, to understand what aspects of service count most heavily with customers. Many times, operations strategies focus on high levels of service elements that customers do not value. For instance, retail customers rated a manufacturer below its competitors on the aspects of service they valued most, but above competitors on less valued aspects (Sharman, 1984). In another case involving retailers in the fast food industry, a restaurant manager noted that the truck driver that made deliveries was ensuring that the food distribution firm performed well in on-time delivery service, but in this case, it was the *wrong* service to satisfy the customer (Stank et al., 2003). Understanding customer perceptions of service will prevent manufacturers from developing myopic order fulfillment goals or developing basic order fulfillment capabilities but “missing the point” regarding customer focus.

Poor order fulfillment for the retailer can mean lack of product (back orders), damaged product, wrong product, or wrong quantity, any of which can adversely affect retailer perceptions of the manufacturer. Poor order fulfillment can also lead to billing errors, stock-outs, or longer cycle times that increase uncertainty, thus leading to higher inventory levels. For these retailers, poor order fulfillment can also adversely impact their ability to service *their* customers—that is, poor order fulfillment from the manufacturer can lead to decreasing sales at the consumer level. For these reasons, the traditional notion of only marketing carrying the responsibility for creating satisfied customers gives way to the importance of operations management in providing superior service that benefits the retailers’ objectives. An important goal for manufacturers is to grow a larger share of the profitable revenue available (Bowersox et al., 2000), and as long as retailers own the shelf, operations strategies that focus on order fulfillment processes – having the customer in mind – can be a key success factor.

## Appendix A. Scale items

All measures used a Likert-type ratings scale ranging from 1 to 7 except where noted.

### A.1. Operational order fulfillment service

Compared to the order fulfillment service of your other home appliance manufacturers, please indicate your opinion about Manufacturer X’s order fulfillment service to you.

1. Ordering procedures (efficiency and effectiveness of Manufacturer X to allow you to *place* orders).<sup>1</sup>
2. Order discrepancy handling (how well Manufacturer X addresses any discrepancies in orders *after* the orders arrive) (see footnote 1).
3. Order lead time (the time from order *placement* to product *delivery*).
4. Special order lead time (special orders are non-regular orders).
5. Order lead time variation (how *consistently* Manufacturer X meets promised delivery dates).
6. Timeliness (product is delivered *on or before* the requested delivery date).
7. Order release quantities (availability and ability to obtain order quantities desired).
8. Order accuracy (how closely shipments match your orders upon arrival—right order, right number, not substitutions) (see footnote 1) (see footnote 1).
9. Order condition (how well Manufacturer X delivers the products undamaged).

### A.2. Relational order fulfillment service

Compared to your other home appliance manufacturers, Manufacturer X provides customer personnel who\_\_\_

1. Try to understand your individual situation.
2. Are responsive to any problems that arise.
3. Work with you to help you make the order fulfillment process more efficient.
4. Make recommendations for continuous improvement on an ongoing basis.
5. Know your needs well (see footnote 1).
6. Are knowledgeable about your business (see footnote 1).
7. Let you know *ahead of time* if your order is going to be delayed.

<sup>1</sup> Indicates an item that was removed during scale purification.

### A.3. Satisfaction

Typically, whenever I think about Manufacturer X, I feel\_\_\_\_

1. Content doing business with Manufacturer X (see footnote 1).
2. Very satisfied with Manufacturer X's service.

When compared to what I expect\_\_\_\_

3. Overall, I am very satisfied with Manufacturer X's service.
4. Fully provides the services that I want from them.
5. Comes close to giving me "perfect" service.
6. Offers service that is barely acceptable.
7. Sets itself apart from other home appliance manufacturers in the industry because of its superior service.

### A.4. Affective commitment

Compared to the order fulfillment service of your other manufacturers in the home appliance industry, please indicate your opinion about Manufacturer X.

1. I have developed a *closer* business relationship with Manufacturer X than my other home appliance manufacturers.
2. I really *like* doing business with Manufacturer X, better than my other home appliance manufacturers.
3. I am willing to put in *more effort* to purchase products from Manufacturer X than from my other home appliance manufacturers.
4. Of all the firms in the home appliance industry that my firm does business with, maintaining the business with Manufacturer X is *most important* (see footnote 1).
5. I want to remain a customer of Manufacturer X more than my other home appliance manufacturers because we *enjoy* our relationship with them.
6. I am *more committed* to Manufacturer X than to my other home appliance manufacturers (see footnote 1).

Compared to your other home appliance manufacturers, how would you characterize the relationship between you and Manufacturer X?<sup>2</sup>

<sup>2</sup> Indicates an item using a semantic differential scale. Insert name of specific company wherever Manufacturer X appears.

- |                                    |   |   |   |   |   |   |   |   |
|------------------------------------|---|---|---|---|---|---|---|---|
| 7. Much lower sense of cooperation | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Much higher sense of cooperation (see footnote 1) |
| 8. Much weaker level of trust      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Much stronger level of trust                      |
| 9. Much lower level of commitment  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Much higher level of commitment (see footnote 1)  |

### A.5. Purchase behavior

When evaluating how much you purchase from Manufacturer X compared to other manufacturers in the home appliance industry\_\_\_\_

1. I consistently purchase Manufacturer X products *more regularly* than other home appliance manufacturers (see footnote 1).
2. I am *more likely to continue* doing business with Manufacturer X than other home appliance manufacturers (see footnote 1).
3. I have purchased more Manufacturer X products over *the last several years* than other home appliance manufacturers.
4. I consider Manufacturer X my *primary* home appliance manufacturer.
5. Manufacturer X *has been* my primary manufacturer for the past few years.
6. I expect Manufacturer X to be my primary home appliance manufacturer *in the future*.

## Appendix B. Demographics

Annual revenue	
Under \$500,000	19.2%
\$500,001 to \$1 million	28.5%
\$1.1 to \$2 million	21.8%
\$2.1 to \$3 million	9.8%
Greater than \$3 million	20.7%
Relationship length	
1–5 years	8%
6–10 years	14.4%
11–15 years	12.1%
16–20 years	16.5%
More than 20 years	49.1%
Percentage of business	
Less than 20%	8.2%
21–30%	18.5%
31–40%	14.1%
41–50%	10.8%
51–60%	14.9%
61–70%	13.9%
Over 70%	19.5%

**Appendix B (Continued)**

Contact method	
E-mail	74.7% (n = 296)
Phone	25.3% (n = 100)

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